

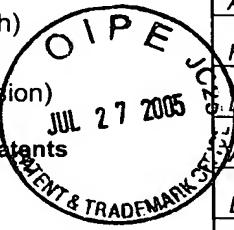
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**PETITION FEE**

Under 37 CFR 1.17(f), (g) &amp; (h)

**TRANSMITTAL**

(Fees are subject to annual revision)

Send completed form to: Commissioner for Patents  
P.O. Box 1450, Alexandria, VA 22313-1450

<i>Justice</i>	Application Number	10/801,718
	Filing Date	March 17, 2004
	First Named Inventor	Y. HIRAIWA et al
	Art Unit	2186
	Examiner Name	TBD
	Attorney Docket Number	TSM-36

Enclosed is a petition filed under 37 CFR 1.102(d) that requires a processing fee (37 CFR 1.17(f), (g), or (h)). Payment of \$ 130.00 is enclosed.

This form should be included with the above-mentioned petition and faxed or mailed to the Office using the appropriate Mail Stop (e.g., Mail Stop Petition), if applicable. For transmittal of processing fees under 37 CFR 1.17(i), see form PTO/SB/17i.

**Payment of Fees** (small entity amounts are NOT available for the petition (fees)

- The Commissioner is hereby authorized to charge the following fees to Deposit Account No. 50-1417:
- petition fee under 37 CFR 1.17(f), (g) or (h)       any deficiency of fees and credit of any overpayments
- Enclose a duplicative copy of this form for fee processing.
- Check in the amount of \$ \_\_\_\_\_ is enclosed.
- Payment by credit card (From PTO-2038 or equivalent enclosed). Do not provide credit card information on this form.

Petition Fees under 37 CFR 1.17(f):	Fee \$400	Fee Code 1462
For petitions filed under:		
§ 1.53(e) - to accord a filing date.		
§ 1.57(a) - to according a filing date.		
§ 1.182 – for decision on a question not specifically provided for.		
§ 1.183 – to suspend the rules.		
§ 1.378(e) for reconsideration of decision on petition refusing to accept delayed payment of maintenance fee in an expired patent.		
§ 1.741(b) – to accord a filing date to an application under § 1.740 for extension of a patent term.		
Petition Fees under 37 CFR 1.17(g):	Fee \$200	Fee code 1463
For petitions filed under:		
§1.12 - for access to an assignment record.		
§1.14 - for access to an application.		
§1.47 - for filing by other than all the inventors or a person not the inventor.		
§1.59 - for expungement of information.		
§1.103(a) - to suspend action in an application.		
§1.136(b) - for review of a request for extension of time when the provisions of section 1.136(a) are not available.		
§1.295 - for review of refusal to publish a statutory invention registration.		
§1.296 - to withdraw a request for publication of a statutory invention registration filed on or after the date the notice of intent to publish issued.		
§1.377 – for review of decision refusing to accept and record payment of a maintenance fee filed prior to expiration of a patent.		
§1.550(c) – for patent owner requests for extension of time in <u>ex parte</u> reexamination proceedings.		
§1.956 – for patent owner requests for extension of time in <u>inter partes</u> reexamination proceedings.		
§ 5.12 – for expedited handling of a foreign filing license.		
§ 5.15 – for changing the scope of a license.		
§ 5.25 – for retroactive license.		
Petition Fees under 37 CFR 1.17(h):	Fee \$130	Fee Code 1464
For petitions filed under:		
§1.19(g) – to request documents in a form other than that provided in this part.		
§1.84 – for accepting color drawings or photographs.		
§1.91 – for entry of a model or exhibit.		
§1.102(d) – to make an application special.		
§1.138(c) – to expressly abandon an application to avoid publication.		
§1.313 – to withdraw an application from issue.		
§1.314 – to defer issuance of a patent.		

Name (Print/Type)	Colin D. Barnitz	Registration No. (Attorney/Agent)	35,061
Signature	<i>Colin D. Barnitz</i>	Date	July 27, 2005

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/801,718 Confirmation No. 1887  
Applicant : HIRAIWA, Y. et al.  
Filed : March 17, 2004  
Title : DATA DUPLICATION CONTROL METHOD  
TC/AU : 2186  
Examiner : TBD  
Docket No. : TSM-36  
Customer No.: 24956

**PETITION TO MAKE SPECIAL**  
**(ACCELERATED EXAMINATION UNDER MPEP § 708.02(VIII))**

**MAIL STOP PETITIONS**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The Applicants petition the Commissioner to make the above-identified application special in accordance with 37 CFR §1.102(d). In support of this Petition, pursuant to MPEP § 708.02(VIII), Applicants state the following.

**(A) REQUIRED FEE**

This Petition is accompanied by the fee set forth in 37 CFR § 1.117(h).  
Payment of the fee has been made in the manner set forth below in Section (G).

07/28/2005 HALI11 00000087 10801718  
01 FC:1464 130.00 OP

**(B) ALL CLAIMS ARE DIRECTED TO A SINGLE INVENTION**

Following the Preliminary Amendment filed on the same date as this paper, claims 1-6 remain pending in the application. All the pending claims of the application are directed to a single invention. If the Office determines that all claims in the application are not directed to a single invention, Applicant will make election without traverse as a prerequisite to the grant of special status in conformity with established telephone restriction practice.

As set forth in independent claims 1, 5 and 6 the invention is generally directed to a data duplication control method, program and apparatus. Under claim 1, the invention is a data duplication method which duplicates data being stored in a storage subsystem connected to a computer, wherein said computer includes a processor unit and a storing unit, said method comprising: an identification information reading step which reads out from a storing unit an identification information list in which identification information of each of a plurality of storage media included in the storage subsystem is stored, a first reading step which reads out from the storing unit, a first duplication definition information which stores the identification information with respect to each of the plurality of storage media, and identification information of a copy destination storage medium of each of the plurality of storage media, a first comparing step which compares the identification information list read out in the identification information reading step, and the first duplication definition information read out in the first reading step, an addition step in which if there exists first identification information that is stored in the identification

information list but not stored in the first duplication definition information in the first comparing step, a copy destination storage medium of a storage medium identified by the first identification information is selected according to a predetermined selection condition, the first identification information and the identification information of the copy destination storage medium thus selected are added to the first duplication definition information, and data in the storage medium identified by the first identification information is copied to the copy destination storage medium thus selected, and a deletion step in which if there exists second identification information that is not stored in the identification information list but is stored in the first duplication definition information in the first comparing step, the second identification information and identification information of a copy destination storage medium, which is a copy destination of a storage medium identified by the second identification information, are deleted from the first duplication definition information, and copying the data of the storage medium identified by the second identification information is stopped.

Additionally, under independent claim 5, the invention is a program which duplicates data being stored in a storage subsystem connected to a computer, wherein said computer includes a processor unit and a storing unit, and said program causes the processor unit to execute steps comprising: an identification information reading step which reads out from a storing unit an identification information list which stores identification information of each of a plurality of storage media included in the storage subsystem, a definition information reading step which

reads out from the storing unit, duplication definition information which stores the identification information with respect to each of the plurality of storage media, and identification information of a copy destination storage medium of each of the plurality of storage media, a comparing step which compares the identification information list read out in the identification information reading step, and the duplication definition information read out in the duplication definition reading step, an addition step in which if there exists first identification information that is stored in the identification information list but not stored in the duplication definition information in the comparing step, a copy destination storage medium of a storage medium identified by the first identification information is selected according to a predetermined selection condition, the first identification information and the identification information of the copy destination storage medium thus selected are added to the duplication definition information, and data in the storage medium identified by the first identification information is copied to the copy destination storage medium thus selected, and a deletion step in which if there exists second identification information that is not stored in the identification information list but is stored in the duplication definition information in the comparing step, the second identification information and identification information of a copy destination storage medium, which is a copy destination of a storage medium identified by the second identification information, are deleted from the duplication definition information, and copying the data of the storage medium identified by the second identification information is stopped.

Furthermore, under independent claim 6, the invention is a computer which duplicates data stored in a storage subsystem, comprising: a first storing means which stores an identification information list in which identification information of each of a plurality of storage media included in said storage subsystem is stored, a second storing means which stores duplication definition information including identification information with respect to each of said plurality of storage media, and identification information of a copy destination storage medium of each of said storage media, and a comparing means which compares the identification information list stored in said first storing means, and the duplication definition information stored in said second storing means, wherein, if there exists first identification information that is stored in said identification information list but not stored in said duplication definition information, said comparing means selects, according to a predetermined selection condition, a copy destination storage medium of a storage medium identified by the first identification information, adds to said duplication definition information, the first identification information and the identification information of said copy destination storage medium thus selected, and copies data in the storage medium identified by the first identification information to said copy destination storage medium thus selected, and if there exists second identification information that is not stored in said identification information list, but stored in said duplication definition information, said comparing means deletes, from said duplication definition information, the second identification information and identification information of a copy destination storage medium, which is a copy

destination of a storage medium identified by the second identification information, and stops copying of data in the storage medium identified by the second identification information.

**(C) PRE-EXAMINATION SEARCH**

A pre-examination search has been conducted, directed to the invention as claimed. The pre-examination search was conducted in the following US Manual of Classification areas:

<u>Class</u>	<u>Subclass</u>
707	200-204
711	100, 111-114, 148-156, 161-165, 170-173

Furthermore, a keyword search was conducted on the USPTO's EAST database, including the US patent database, the published US patent applications database, and the European and Japanese patent abstract databases. In addition, a search for non-patent literature was conducted on the ACM (Association for Computing Machinery) online databases.

**(D) REFERENCES DEEMED MOST-CLOSELY RELATED TO THE SUBJECT MATTER ENCOMPASSED BY THE CLAIMS**

Based upon a review of the documents located by the search and the documents already of record in the application, the references deemed to be most-closely related to the subject matter encompassed by the claims are listed below.

These documents were made of record in the present application by the Information Disclosure Statements filed July 6, 2005.

<u>Document No.</u>	<u>Inventor</u>
US 6507883	Bello et al.
US 6886019	Cannon et al.
US 20030196052	Bolik et al.
US 20040046803	James
US 20040107325	Mori
US 20040133611	Cabrera et al.
US 20040205310	Yamagami
US 20040243776	Matsui et al.
US 20050076070	Mikami

Because all of the above-listed references are already of record in the present application, in accordance with MPEP § 708.02(VIII)(D), additional copies of these documents have not been submitted with this Petition.

#### **(E) DETAILED DISCUSSION OF THE REFERENCES**

The references deemed most-closely related are discussed below in Section (E)2, pointing out, with the particularity required by 37 CFR 1.111 (b) and (c), how the claimed subject matter is patentable over the teachings of these documents.

##### **1. Discussion of the Invention**

The present invention may be applied to storage systems in which remote or mirror copies are maintained. Under the invention, when there is a change in a group of volumes managed by a host computer, data duplication processing is immediately carried out against the changed volume. A feature of the invention includes adding and/or removing identification information of storage media to or

from duplication definition information. It is submitted that the cited references, whether taken individually, or in combination, fail to teach or suggest the invention as claimed in independent claims 1, 5 and 6.

As set forth in claims 1, 5 and 6, a first feature of the invention includes that if there exists first identification information that is stored in the identification information list but not stored in the duplication definition information, a copy destination storage medium of a storage medium identified by the first identification information is selected according to a predetermined selection condition, the first identification information and the identification information of the copy destination storage medium thus selected are added to the duplication definition information.

Additionally, as also recited in claims 1, 5 and 6, a second feature of the invention includes that if there exists second identification information that is not stored in the identification information list but is stored in the duplication definition information, the second identification information and identification information of a copy destination storage medium, which is a copy destination of a storage medium identified by the second identification information, are deleted from the duplication definition information.

As will be discussed in more detail below, the prior art does not teach or suggest the above-described features.

**2. Discussion of the References Deemed to be Most-Closely Related**

The patent to Bello et al., US 6507883, discloses an automated data storage library that stores logical volumes, including logical volumes to be copied to a second library, in cache storage, and migrates logical volumes to physical media volumes stored on storage shelves. If a logical volume has been migrated, a director will provide a recall request. A library controller responds to a request for recalling one of the logical volumes to be copied, by first determining, via a table 90, which physical media volume 93 contains the requested migrated logical volume. The library controller identifies all of the logical volumes to be copied 96, in addition to the requested migrated logical volume, that are migrated 92 and stored as stacked logical volumes on the determined physical media volume 93 containing the requested migrated logical volume. The library controller selects up to "N" of the identified logical volumes, including the requested migrated logical volume, and provides a selection list 105 of the selected logical volumes, preferably arranged in a sequence in accordance with the order that the selected logical volumes are written on the determined physical media volume. The library controller employs the accessor to transport and mount the determined physical media volume to a data storage drive, and recalls the selected logical volumes of the mounted physical media volume, via the data storage drive, to the cache storage in accordance with the selection list. (See, e.g., Abstract; column 2, line 33, through column 3, line 28; and column 6, line 56, through column 7, line 51.) However, unlike the present invention, Bello et al. do not disclose adding identification information to duplication

definition information or deleting identification information from duplication definition information. More particularly, Bello et al. do not teach that if there exists first identification information that is stored in the identification information list but not stored in the duplication definition information, a copy destination storage medium of a storage medium identified by the first identification information is selected according to a predetermined selection condition, the first identification information and the identification information of the copy destination storage medium thus selected are added to the duplication definition information, as recited in claims 1, 5 and 6. Furthermore, Bello et al. do not teach that if there exists second identification information that is not stored in the identification information list but is stored in the duplication definition information, the second identification information and identification information of a copy destination storage medium, which is a copy destination of a storage medium identified by the second identification information, are deleted from the duplication definition information, as recited in claims 1, 5 and 6.

The patent to Cannon et al., US 6886019, discloses a storage management method and system for optimizing the selection and accessing of stored files to avoid mount and position thrashing. The method for generating file copies with minimal mounting and positioning of storage volumes involves receiving a copy set generation request specifying selection criteria for files to be included in a copy set, identifies matching files meeting the selection criteria, locates the matching files on their storage volumes, and copies the files to the copy set, ignoring the file order in

the request but considering the proximity of the matching files to each other on the storage volumes. The method ensures that each matching file is included, without duplication, in the copy set, and also ensures that the files are copied with minimal delays in mounting and positioning of the storage volumes. (See, e.g., Abstract, and column 3, line 30, through column 4, line 38.) However, unlike the present invention, Cannon et al. do not teach adding identification information to duplication definition information or deleting identification information from duplication definition information. More particularly, Cannon et al. do not teach that if there exists first identification information that is stored in the identification information list but not stored in the duplication definition information, a copy destination storage medium of a storage medium identified by the first identification information is selected according to a predetermined selection condition, the first identification information and the identification information of the copy destination storage medium thus selected are added to the duplication definition information, as recited in claims 1, 5 and 6. Furthermore, Cannon et al. do not teach that if there exists second identification information that is not stored in the identification information list but is stored in the duplication definition information, the second identification information and identification information of a copy destination storage medium, which is a copy destination of a storage medium identified by the second identification information, are deleted from the duplication definition information, as recited in claims 1, 5 and 6.

The published patent application to Bolik et al., US 20030196052, discloses a system, method, and program for grouping backup objects stored in backup storage. A backup group is created and a plurality of backup objects are added as members of the backup group in separate backup transactions. The backup objects are stored in backup storage when adding the backup objects to one backup group. The backup objects sent in the separate backup transactions may originate from different backup clients. In one embodiment, adding the backup objects to the backup group comprises adding an entry to a database for each backup object, where the entry identifies the backup object and the backup group in which the backup object is a member. (See, e.g., Abstract, and paragraphs 8-17.) However, unlike the present invention, Bolik et al. do not disclose adding identification information to duplication definition information or deleting identification information from duplication definition information. More particularly, Bolik et al. do not teach that if there exists first identification information that is stored in the identification information list but not stored in the duplication definition information, a copy destination storage medium of a storage medium identified by the first identification information is selected according to a predetermined selection condition, the first identification information and the identification information of the copy destination storage medium thus selected are added to the duplication definition information, as 1, 5 and 6. Additionally, claims 1, 5 and 6 are also patentable over Bolik et al., since Bolik et al. do not teach that if there exists second identification information that is not stored in the identification information list but is stored in the duplication definition information,

the second identification information and identification information of a copy destination storage medium, which is a copy destination of a storage medium identified by the second identification information, are deleted from the duplication definition information.

The published patent application to James, US 20040046803, discloses a system for the electronic storage of data objects. The system comprises a first, designated foreground data storage device and a second, designated background data storage device. The data storage devices are connectable by way of a releasable connection. An interface engine is adapted to manage the transfer of data objects to and from the devices and also between two of the devices when the two devices are connected to each other. The interface allows data objects to be promoted from a background device to a foreground device. The interface generates a logical stack of all the data objects stored in the system, including an index list of identifiers relating to the data objects, the index list being visible from any one of the designated data storage devices whether or not it is connected to another designated data storage device. (See, e.g., Abstract, and paragraphs 5-8 and 62-64.) However, unlike the present invention, James does not disclose adding identification information to duplication definition information or deleting identification information from duplication definition information. More particularly, James does not teach that if there exists first identification information that is stored in the identification information list but not stored in the duplication definition information, a

copy destination storage medium of a storage medium identified by the first identification information is selected according to a predetermined selection condition, the first identification information and the identification information of the copy destination storage medium thus selected are added to the duplication definition information, as recited in claims 1, 5 and 6. Furthermore, James does not teach that if there exists second identification information that is not stored in the identification information list but is stored in the duplication definition information, the second identification information and identification information of a copy destination storage medium, which is a copy destination of a storage medium identified by the second identification information, are deleted from the duplication definition information, as recited in claims 1, 5 and 6.

The patent to Mori, US 20040107325, discloses a storage system that has a storage control device connected to a host computer, able to control the data input/output (I/O) to/from a storage device according to a data I/O request sent from the host computer. The storage control device manages a storage area in the storage device using a logical volume that is a logical storage area created on the storage area. The system stores, in the logical volume, management information that enables an operating system running on the host computer to manage the logical volume. The storage control device controls duplication of data in a first logical volume also to be stored on a real-time basis (in synchronism) in a second logical volume that is different from the first logical volume. During synchronized

(real-time) duplication, a logical volume identifier of the first logical volume and a logical volume identifier of the second logical volume described in the management information are made to be consistent with each other, and a data set identifier of the first logical volume and a data set identifier of the second logical volume described in the management information are made to be consistent with each other. In the method of the invention, the storage system generates a control program for performing a process for setting the logical volume identifier and the data set identifier for the first logical volume, which are described in the management information in the first logical volume, and the logical volume identifier and the data set identifier for the second logical volume, which are described in the management information in the second logical volume, to be different from each other. (See, e.g., Abstract, paragraphs 19-27, and paragraphs 41-49.) However, unlike the present invention, Mori does not disclose adding identification information to duplication definition information or deleting identification information from duplication definition information. More particularly, Mori does not teach that if there exists first identification information that is stored in the identification information list but not stored in the duplication definition information, a copy destination storage medium of a storage medium identified by the first identification information is selected according to a predetermined selection condition, the first identification information and the identification information of the copy destination storage medium thus selected are added to the duplication definition information, as recited in claims 1, 5 and 6. Furthermore, claims 1, 5 and 6 are also patentable over Mori, because Mori

fails to teach that if there exists second identification information that is not stored in the identification information list but is stored in the duplication definition information, the second identification information and identification information of a copy destination storage medium, which is a copy destination of a storage medium identified by the second identification information, are deleted from the duplication definition information.

The published patent application to Cabrera et al., US 20040133611, discloses a system for migrating a volume from a source diskpack to a receiving diskpack. An export application communicates with a logical volume provider to automatically determine the minimal subset of disks. The volumes and volume extents of the source diskpack are included in the export such that transitive closure is preserved. This minimal subset is referred to as a platter. The logical volume subsystem can be a hardware provided subsystem or it can be implemented as a software component. The logical volume subsystem, at the direction of the export application, causes the disks in the platter to be removed from the source diskpack and associated with the receiving diskpack. In one method used to migrate a volume or set of volumes between diskpacks, a program executing the method receives an identifier for a volume that is to be exported. The method then searches the disks containing the identified volume extents for extents belonging to other volumes called "friend volumes". The disks on which the friend volumes reside are added to the platter. The method then recursively searches for further volume extents on disks

occupied by the friend volumes. The method proceeds in this manner until no new disks are discovered. The platter is then exported from the source diskpack and imported into the receiving diskpack. (See, e.g., Abstract, and paragraphs 17-22.) However, unlike the present invention, Cabrera et al. do not disclose adding identification information to duplication definition information or deleting identification information from duplication definition information. More particularly, Cabrera et al. do not teach that if there exists first identification information that is stored in the identification information list but not stored in the duplication definition information, a copy destination storage medium of a storage medium identified by the first identification information is selected according to a predetermined selection condition, the first identification information and the identification information of the copy destination storage medium thus selected are added to the duplication definition information, as recited in claims 1, 5 and 6. Furthermore, Cabrera et al. do not teach that if there exists second identification information that is not stored in the identification information list but is stored in the duplication definition information, the second identification information and identification information of a copy destination storage medium, which is a copy destination of a storage medium identified by the second identification information, are deleted from the duplication definition information, as recited in claims 1, 5 and 6.

The published patent application to Yamagami, US 20040205310, discloses a method and apparatus for providing a volume pool. One or more mirror volumes are

selected from the volume pool to perform mirroring of user-specified primary volumes. The specific mirror volumes are not specified by the user, which can be a human user or a machine user. The user can specify primary volumes by referencing an application and an associated data object. The user can specify a volume pool from which mirror volumes are selected. The invention is applicable to local mirroring configurations and to remote mirroring configurations. (See, e.g., Abstract and paragraphs 23 and 33-40.) However, unlike the present invention, Yamagami does not disclose adding identification information to duplication definition information or deleting identification information from duplication definition information. More particularly, Yamagami does not teach that if there exists first identification information that is stored in the identification information list but not stored in the duplication definition information, a copy destination storage medium of a storage medium identified by the first identification information is selected according to a predetermined selection condition, the first identification information and the identification information of the copy destination storage medium thus selected are added to the duplication definition information, as recited in claims 1, 5 and 6. Furthermore, claims 1, 5 and 6 are also patentable over Yamagami, since Yamagami does not teach that if there exists second identification information that is not stored in the identification information list but is stored in the duplication definition information, the second identification information and identification information of a copy destination storage medium, which is a copy destination of a storage medium

identified by the second identification information, are deleted from the duplication definition information.

The published patent application to Matsui et al., US 20040243776, discloses a storage system control method of controlling a storage system including a first storage apparatus 200 including a first storage volume 230 to store data, a second storage apparatus 200 including a second storage volume 230 to store data, the second storage apparatus 200 being connected to the first storage apparatus 200, and an information processor 100 communicably connected to the first storage. The method comprises the steps of: transmitting by the information processor an identifier to identify the second storage volume in the second storage apparatus to the first storage apparatus, describing by the first storage apparatus the identifier in a data input/output request for the second storage volume and transmitting the data input/output request to the second storage apparatus, and executing by the second storage apparatus data input/output processing for the second storage volume specified by the identifier described in the data input/output request. (See, e.g., Abstract, paragraphs 8-12, and paragraphs 25-30.) However, unlike the present invention, Matsui et al. do not disclose adding identification information to duplication definition information or deleting identification information from duplication definition information. More particularly, Matsui et al. do not teach that if there exists first identification information that is stored in the identification information list but not stored in the duplication definition information, a copy destination storage medium of

a storage medium identified by the first identification information is selected according to a predetermined selection condition, the first identification information and the identification information of the copy destination storage medium thus selected are added to the duplication definition information, as recited in claims 1, 5 and 6. Furthermore, Matsui et al. do not teach that if there exists second identification information that is not stored in the identification information list but is stored in the duplication definition information, the second identification information and identification information of a copy destination storage medium, which is a copy destination of a storage medium identified by the second identification information, are deleted from the duplication definition information, as recited in claims 1, 5 and 6.

The published patent application to Mikami, US 20050076070, discloses a system for managing a copy processing between volumes. The system includes a management server 100, business-operation servers 110, and storage apparatuses 120. The management server 100, the business-operation servers 110, and the storage apparatuses 120 are computers that include processing units 101, 111 and 121, such as CPUs, and memory units 102, 112 and 122, such as RAMs and ROMs, respectively. The system allows the replication data and a volume that stores this replication data to be flexibly managed in response to the needs of a user. When receiving an instruction of the backup for a file or the like which becomes the backup target, if there has been received a specification about the attributes of the backup target, there is provided the following managing method: the specified attributes and

the like are managed in a manner of being made to correspond to the replication data and a volume name into which this replication data should be stored. (See, e.g., Abstract, paragraphs 2-5, and paragraphs 20-26.) However, unlike the present invention, Mikami does not disclose adding identification information to duplication definition information or deleting identification information from duplication definition information. More particularly, Mikami does not teach that if there exists first identification information that is stored in the identification information list but not stored in the duplication definition information, a copy destination storage medium of a storage medium identified by the first identification information is selected according to a predetermined selection condition, the first identification information and the identification information of the copy destination storage medium thus selected are added to the duplication definition information, as recited in claims 1, 5 and 6. Furthermore, claims 1, 5 and 6 are also patentable over Mikami, because Mikami fails to teach that if there exists second identification information that is not stored in the identification information list but is stored in the duplication definition information, the second identification information and identification information of a copy destination storage medium, which is a copy destination of a storage medium identified by the second identification information, are deleted from the duplication definition information.

**(F) CONCLUSION**

As demonstrated by the above discussion, the references fail to teach or suggest that if there exists first identification information that is stored in the identification information list but not stored in the duplication definition information, a copy destination storage medium of a storage medium identified by the first identification information is selected according to a predetermined selection condition, the first identification information and the identification information of the copy destination storage medium thus selected are added to the duplication definition information, as recited in claims 1, 5 and 6.

Additionally, the references fail to teach or suggest that if there exists second identification information that is not stored in the identification information list but is stored in the duplication definition information, the second identification information and identification information of a copy destination storage medium, which is a copy destination of a storage medium identified by the second identification information, are deleted from the duplication definition information, as recited in claims 1, 5 and 6.

Thus, it is submitted that all of these claims are patentable over the cited references taken individually, or in combination with each other. The remaining claims are dependent claims, claim additional features of the invention, and are patentable at least because they depend from allowable base claims. Accordingly, the requirements of 37 CFR §1.102(d) having been satisfied, the Applicants request that this Petition to Make Special be granted and that the application be examined according to prescribed procedures set forth in MPEP §708.02 (VIII).

The Applicants prepared this Petition in order to satisfy the requirements of 37 C.F.R. §1.102(d) and MPEP §708.02 (VIII). The pre-examination search required by these sections was “directed to the invention as claimed in the application for which special status is requested.” MPEP §708.02 (VIII). The search performed in support of this Petition is believed to be in full compliance with the requirements of MPEP §708.02 (VIII); however, Applicants make no representation that the search covered every conceivable search area containing relevant prior art. It is always possible that prior art of greater relevance to the claims may exist. The Applicants urge the Examiner to conduct his or her own complete search of the prior art, and to thoroughly examine this application in view of the prior art cited above and any other prior art that may be located by the Examiner’s independent search.

Further, while the Applicants have identified and discussed certain portions of each cited reference in order to satisfy the requirement for a “detailed discussion of the references, which discussion points out, with the particularly required by 37 C.F.R. §1.111(b) and (c), how the claimed subject matter is patentable over the references” (MPEP §708.02(VIII)), the Examiner should not limit review of these documents to the identified portions, but rather is urged to review and consider the entirety of each reference.

**(G) FEE PAYMENT (37 C.F.R. 1.17(h))**

The fee required by 37 C.F.R. § 1.17(h) is to be paid by:

- the Credit Card Payment Form (attached) for \$130.00.  
 charging Account 50-1417 the sum of \$130.00.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417. A duplicate of this petition is attached.

Respectfully submitted,

  
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